

ABSTRACT OF THE DISCLOSURE

1 A ring oscillator for a test apparatus and method for verifying
2 fabrication of transistors in an integrated circuit on a die under test is
3 implemented. The ring oscillator is fabricated on the die and includes
4 a positive feedback loop between a circuit output terminal and a
5 feedback input terminal. The feedback loop includes a plurality of
6 delaying stages connected in cascade. A transfer gate is coupled to
7 each delaying stage. Each of the transfer gates includes a pair of
8 transistors of the first and second conductivity types connected in
9 parallel. The ring oscillator is operable to provide a first oscillator
10 output signal during a first test mode when the transistors of the first
11 conductivity type are ON and the transistors of the second
12 conductivity type are OFF. The ring oscillator is operable to provide a
13 second oscillator output signal during a second test mode when the
14 transistors of the first conductivity type are OFF and the transistors of
15 the second conductivity type are ON. The ring oscillator is operable to
16 provide a second oscillator output signal during a second test mode
17 when the transistors of the first conductivity type are ON and the
18 transistors of the second conductivity type are ON.